

Table 1 – Water Service 1**Commentary by COMPANY****Lines 1- 8 Household - Leakage**Company supply pipe repair policy

Under the LeakStop scheme Bristol Water will repair, free of charge, external underground supply pipes owned by household customers, on the first occasion a leak is found on their pipe. Access to the pipe must be readily available, and the pipe less than 1.5 meter deep. The Company does not take responsibility for exceptional costs needed for the reinstatement of special surfaces. LeakStop does not apply to non-household premises or to household premises leased to tenants on a commercial basis. Customers sharing a common supply pipe will each receive the free or subsidised repair.

The subsidized household supply pipe leak repair initiative Leakstop is mainly promoted to customers through company leaflets and through details on the Bristol Water website. The “leakage code of practice for domestic customers” leaflet explains how Bristol Water can help with leaks on private supplies. This leaflet includes general details of the scheme, as well as a freephone telephone number for queries. The “Leakstop” leaflet, which is normally issued to the customer by an inspector contains information on the Leakstop initiative and an application card for subsidized/free repair under Leakstop.

In the event of a second leak on the same pipe, the repair will be available at the prevailing subsidised LeakStop prices, currently £110 including VAT.

The Company does not make any contribution towards the cost incurred by the customer if they choose to replace their supply pipe.

Table entries

The total number of supply pipes repaired in the period 1 April 2006 - 31 March 2007 was 1594. Of these 740 repairs were unsubsidized repairs on household properties and 495 repairs on household properties under the Leakstop scheme. This amounts to a total of 1235 repairs on household supply pipes (*Line 1, Table 1*). The methodology has changed from last submission when only household properties under Leakstop were accounted for in Line 1.

The total number of household supply pipes repaired under the LeakStop scheme was 495. Of these, 476 were repaired free (*Line 2, Table 1*) and 19 repaired with a subsidy (*Line 3, Table 1*).

The company has ceased to make any contribution under the LeakStop scheme from February 2000 to replace the customer's supply pipe (*Line 4-6, Table 1*). No information on the number of household supply pipes replaced (*Line 4*) is collated since it is perceived that the accuracy of this data will be low and would not add value to the line entry.

The average time taken to repair supply pipe leaks under the LeakStop scheme was 4.8 days (compared with 4.1 days quoted last year) from the day of notification. This was calculated through investigating a sample of 99.6% of the total number of LeakStop jobs in the Works Management System.

The average repair time for a Leakage Notice not eligible for LeakStop was 18.5 days (compared with 17.6 days quoted last year). This was calculated through investigating a sample of 97.9% of all Leakage Notice repairs not eligible for LeakStop in the Works Management System.

This gives the total time saved through LeakStop as 13.7days/job, which is an increase on last year's figure of 13.5 days/job

The Company specific average supply pipe burst rate at 50m pressure for household properties is 0.994 m³/hour. The burst rate is determined through direct measurements at the time the leak has been detected. Each leakage inspector is equipped with a measurement set to determine flow and pressure at the time of the leak. Measurements can only be undertaken when an empty boundary box is present or the customer is already metered. A total of 482 measurements have so far been taken to estimate the current household supply pipe leakage rate.

The flow rate at 50m pressure is 0.994 m³/hour and the company specific Average Zonal Night Pressure is 46.38 m. Using the FAVAD theory, the pressure corrected flow rate is 0.957 m³/hour. The company Hour to Day is 23.33 and the average loss from a leaking supply pipe is therefore 22.33 m³/day.

The faster repair time of LeakStop saves 22.33 * 18.5 days = 305.9 m³ per job.

With a total of 495 Leakage Notices eligible for Leak Stop the total saving achieved was **151.4** MI, or **0.41 MI/day**. (*Line 7, Table 1*) Savings are only calculated for the Leakstop initiative and do not account for savings under the Leakage Noticing (Waste Notice) initiative.

The cost of the Leakstop initiative is extracted from the financial accounting module within SAP. Actual cost of cost center 3601 (Leak Stop) for the financial year 2006/07 is £128,838 (*Line 8, Table 1*).

Lines 9-32 Promoting the efficient use of water

This year all customers were again provided with access to advice on water efficiency building on information given in previous years. Information was provided in the form of the annual newsletter 'Watertalk' distributed via the local press to approximately 87,500 customers, in the bill enclosure sent to all customers, and via the ever popular summer open days and events, the sponsorship of local press weather reports, as well as the company website. Provided within these publications were

- 'Are you a Water Wizard?' self water audit
- Water saving tips
- Special discount offers on recycled plastic water butts and composters
- Contact details for leakstop, and meter options
- Information on open days.
- Water saving gardening tips and promotion of the free Water Saving Garden leaflet
- "Have you got the bottle" campaign – promoting the re-use of plastic bottles as cistern devices

The company's strategy to inform and provide access to water efficiency advice to all customers contributes to sustaining the drive to use water efficiently by sending a consistent message.

The market research undertaken by the company, 'Customer Satisfaction Survey 2007' showed that the current strategy continues to be successful. Awareness of water efficiency amongst domestic customers has improved for a 3rd year in a row, as has water efficiency behaviour, in particular when buying new appliances. Customer awareness of water efficiency has improved from 80% to 88% claiming their awareness is very/fairly good. Water efficiency behaviour has also risen at the very/fairly good level from 78% to 88%. Three quarters of customers claimed that when buying a new appliance the water efficiency rating is taken into account compared with just over half two years ago.

Targeting schools with the water efficiency message is still a key part of Bristol Water's strategy and the company has been active in collaborating with schools through the Bristol Water website, school visits, education packs and promotional work.

BusinessCare continues to promote good water management to Major Users and business customers by providing monthly consumption data, offering audit services and free advice. This year BusinessCare purchased another 10 modem accessed flow loggers to be installed at selected large customer sites to enable these businesses to monitor the effects of their water efficiency initiatives via the logger manufacturer's website.

Bristol Water continues to be an active member of the Water UK Water Efficiency Network, a useful forum for the sharing of ideas, best practice and research projects, and to sponsor and liaise with Waterwise.

BLOCK B HOUSEHOLDS – WATER EFFICIENCY METHODS

Lines 9-12

Cistern Devices

The company promotes the use of a plastic bottle as a cistern device through the established campaign 'Have you got the bottle?' which provides advice on how to fit and test the device. At the Blagdon Visitor Centre there is a water conservation exhibition where staff can advise, with the help of a display, how to select and install a device. Laboratory water sample bottles which would otherwise have been disposed of are now recycled as cistern devices given free to customers with an instruction leaflet on installation. Hippos with advice printed on them are also made available.

The reported figure of installed cistern devices is based upon the number of devices requested and collected by customers during the year.

For savings achieved through cistern devices a figure of 11.52 uses per property per day has been used. The flushing frequency data is based on figures given in CP187 "*Increasing the value of domestic water use data for demand management*". The savings per device are assumed to be 1 litre per device. Whilst larger hippos are installed and the "*Cistern device study*" showed little evidence of double flushing, the majority of devices installed are the 1litre bottles hence a conservative assumption of 1 litre saving per flush for all cistern devices has been made.

CDDs

No distributed	830
Assumed installation rate	70%
Assumed saving per flush	1 litre
Frequency of use	11.52 use/prop/d
Estimated Saving	0.007 MI/d

The campaign is promoted through leaflets, demonstrations at the visitor centre during open days, and via the website, all of which are managed and delivered by the Corporate Affairs department. The total costs of these activities are known. The percentage attributable to promoting and distributing cistern devices has been estimated for each activity.

General promotional activities	Total cost (all opex)	Estimated % of total that is WE		Estimated % that is Cistern related	
		%	£	%	£
Open days	£ 70,466	50%	£35,233	20%	£ 7,047
Schools + general talks and tours	£ 5,230	50%	£ 2,615	20%	£ 523
Website	£ 16,930	10%	£ 1,693	20%	£ 339
CA staff	£122,034	40%	£48,814	10%	£ 4,881
Total					£ 12,790

Lines 13-16 Water Butts

The company has continued to subsidise and promote water butts at open days and through advertising on the website and in the bill enclosure.

A total of 875 water butts have been sold. This figure would have been higher as there was greater demand for water butts than the supplier could meet.

We assume that all water butts sold are installed. The reported figure uses an assumption that each water butt sold results in a saving of 1 m³/year, based on a typical 200l butt being filled and emptied 5 times in a year.

Water butts

No distributed	875
Assumed installation rate	100 %
Assumed saving	200 litres/butt/fill
Assumed no times filled	5
Estimated Saving	0.0024 MI/d

The company has continued to subsidise and promote water butts through a number of activities - at open days, through advertising on the website and in the bill enclosure - all of which are managed and delivered by the Corporate Affairs department. The total costs of these activities are known. The percentage attributable to promoting and distributing water butts has been estimated for each activity.

General promotional activities	Total cost (all opex)	Estimated % of total that is WE		Estimated % that is water Butt related	
		%	£	%	£
Open days	£ 70,466	50%	£35,233	10%	£ 3,523
Schools + general talks and tours	£ 5,230	50%	£ 2,615	5%	£ 131
Website	£ 16,930	10%	£ 1,693	10%	£ 169
CA staff	£122,034	40%	£48,814	10%	£ 4,881
Bill enclosure	£ 43,309	3.125%	£ 1,353	10%	£ 135
Total					£ 8,840

Lines 17-22

Household Water Audits

In line with Ofwat good practice, the availability of self-audit packs is referred to in the majority of all literature and the packs are freely distributed at all Blagdon open days, school visits, and other events. This year the metering options leaflet, containing the self-audit and water saving tips proved extremely popular resulting in 40,000 reprints, 20,000 requested this year, and 20,000 ready for next year. It is estimated a total of approximately 25,260 self audit packs have been distributed by the company.

In addition, a self water audit pro-forma is available on the Bristol Water's web site, which also has an interactive online water audit calculator and provides tips on good water management. The water wizard page was accessed 110 times.

Self audits

Estimated distributed at open days	3,700
Schools packs distributed (containing self audit)	
via tours at Visitor centre or sent	600
via school visits	960
Metering leaflets requested/distributed	20,000
No. Website visits	110
Total	<u>25,370</u>

This year we have estimated an audit take up rate of 25%. We have assumed a saving per audit of 10l/d, in keeping with the Ofwat Best Practice Register.

Self audits

No distributed	25,370
Assumed uptake rate	25 %
assumed saving/audit	10 litres/day

Saving	0.0634 MI/d
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The availability of self audit packs is promoted through a number of activities - leaflets, demonstrations at visitor centre during open days, schools / interest groups talks and tours, educational packs, and via the website - all of which are managed and delivered by the Corporate Affairs department. The total costs of these activities are known. The percentage attributable to promoting and distributing self-audit packs has been estimated for each activity.

It should also be noted that the costs reported for metering leaflet include costs incurred for 20,000 leaflets distributed this year, and costs incurred for printing 20,000 leaflets that will be distributed in 2007/08.

General promotional activities	Total cost (all opex)	Estimated % of total that is WE		Estimated % Self Audit related	
		%	£	%	£
Open days	£ 70,466	50%	£35,233	20%	£ 7,047
Schools + general talks and tours	£ 5,230	50%	£ 2,615	20%	£ 523
Website	£ 16,930	10%	£ 1,693	20%	£ 339
CA staff	£122,034	40%	£48,814	20%	£ 9,763
Bill enclosure	£ 43,309	3.125%	£ 1,353	0%	
Metering leaflet	£ 7,937	10%	£ 793.70	100%	£ 794
Total					£ 18,465

BLOCK C NON-HOUSEHOLDS – WATER EFFICIENCY METHODS

Lines 23-28

An estimated 3 self-audit packs have been distributed to non-household customers this year. BusinessCare focus on the major 70 commercial users and these have all received the self-audit pack in previous years. Instead BusinessCare continues to promote good water management to major users by providing monthly consumption data and access to real time flow data to a growing number of customers, see commentary under Block D, Line 30. The

self-audit pack is being reviewed to update and distribute to commercial users other than the major 70 users. No costs are associated with this method. It is not possible to estimate savings related to this initiative.

BLOCK D TOTALS

Line 29 – total estimated savings

Whilst Bristol Water undertakes a range of activities to promote water efficiency in many cases it is not possible to estimate how much water savings they produce, therefore the total savings estimated here should be considered an underestimation of the total impact of Bristol Water's water efficiency related activities. Total savings that can be estimated from activities that promote water efficiency, including free or subsidised supply pipe leakage, is 0.513Ml/d.

Estimated savings	Ml/d
Block A Household	0.410
Subtotal	0.410
Block B Household	
CDDs	0.007
Water Butts	0.002
Self audits	0.064
Block C Non-household	0
Block E Household	0
Block E Non-household	
Regs Inspections	0.007
North Somerset Schools	0.023
Sub total	0.103
TOTAL	0.513

Using the population figures provided in lines 13 & 14 (household), and 15 & 16 (non household) in Table 7 the savings per capita can be estimated as follows;

Household Savings per Capita	L/d
<i>CDDs</i>	0.006
<i>Water Butts</i>	0.002
<i>Self Audits</i>	0.062
Total	0.070

Non-Household Savings per Capita	L/d
<i>Regs Inspections</i>	0.139
<i>Schools project</i>	0.457
Total	0.596

Line 30 – total costs

Description	Initiative	Capex	Opex	TOTAL
Leakstop	Household leakage	£127K		£127K
Corporate Affairs	Education, PR. Audit and efficiency material, customer feedback surveys		£115k	£115k
BusinessCare	Water management tools		£6k	£6k
Waterwise sponsorship	Building the evidence base		£6k	£6k
BW staff	WEN liaison, WE strategy development		£4k	£4k
Water Regs	Inspection and enforcement		£19k	£19k
North Somerset Schools	Leakage detection project		£2k	£2k
TOTAL		£127k	£152k	£278k*

*note total does not add to £278k due to roundings

BLOCK E OTHER WATER EFFICIENCY METHODS**Lines 31-33*****Water Regulations Inspections***

The Water Regulations team focus 90% of their activities on farm and agricultural related inspections, and 10% on other commercial premises. During these visits staff are instructed to ensure that the customer has an overall awareness of water conservation and to highlight areas they see as potentially wasting water and offer more specific advice. The Regulations inspectors meet twice a month to keep up to date with latest innovations and new technology and to ensure consistency in advice delivered.

During the last year 45 leaking troughs were identified and repairs enforced. An average trough leaks 282l/day. Most troughs are outside of DMA areas and so have an assumed average run time of 196 days. This equates to a saving of 0.007Mld

It is estimated that approximately 5% of Inspectors' time, and 1.5% of administration time is spent on water efficiency activities, equating to a cost of £19,142 for this initiative.

Lines 34-36***North Somerset Schools Project***

Bristol Water was approached by North Somerset Council to assist in a basic study to investigate the level of non legitimate continuous use at 70 schools in the North Somerset area. All schools were logged during the day during the school holidays. The 12 that registered a flow during the day were monitored

at night to identify the level of leakage. Between them these 12 schools were found to be leaking 0.023Mld. North Somerset Council used this information to take appropriate action.

It is estimated that this initiative cost BW £1,592

OTHER INITIATIVES

In addition to the activities described in Blocks A, B, C+ E Bristol Water undertakes a series of activities in keeping with its water efficiency strategy to promote water efficiency.

Public education

Bristol Water continues with a broad public education strategy, which includes a wide range of activities that took place during the year.

- 19 free Open Days at Blagdon Visitor Centre attracting over 16,000 visitors, which features a Water Efficiency Room and a series of exhibitions on good water management and the history and workings of Bristol Water
- 50 schools were given educational talks, including 18 schools who visited and toured the Blagdon Visitor Centre.
- Regular public information was communicated via direct advertising and editorial work in the local press and broadcast media.
- A comprehensive and detailed company web site, with information on all aspects of water efficiency, including water self audits, effective use of water in the garden, how to obtain water saving devices, advice on metering, and a metering consumption ready-reckoner. The website receives an average of 23,685 visits a month.

The website has seen a significant rise to 284,222 visitors (an increase of 191,094 visitors on the previous year) and 724,677 page hits this year. The most visited areas were leisure and education. It is not possible to estimate the savings achieved from this promotional work.

The effectiveness of BW information and customer feedback is monitored and collated through two customer surveys. Whilst in one survey customers said they wanted more information and motivation on water efficiency, they also made it clear that they did not think it was Bristol Water's responsibility to provide this information. This was backed up in another survey where customers were asked what water conservation information could Bristol Water supply, 40% of customers replied "none". There is also resentment to the idea of installing retrofit devices in their homes. This would need to be explored further before pursuing such initiatives.

Non-Household Customers

The company has a designated BusinessCare department, whose objective is to provide assistance and advice on efficient and cost-effective water management for businesses and institutions.

BusinessCare, continues to be promoted by customer visits, leaflets and through a specific site on the Bristol Water web site.

Each month major customers are sent a monthly water consumption report including comparative data and a graph, this facilitates good water management and allows for any consumption discrepancies to be identified quickly and investigated.

Most customers using this information are able to manage discrepancies in water use themselves. Where this is not the case BusinessCare facilitate the resolution of issues.

As an alternative to self-audits, the company plans to provide all major users with modem linked flow loggers communicating directly to a designated web site. This will allow businesses that have this equipment installed to monitor their consumption at anytime. The intention is that this enabling technology will allow these customers to pick up occurrences of unusual demand and possible waste, or observe the benefits of any efficiency measures adopted. Following a successful trial an additional 10 loggers have been purchased and are due to be installed in early 2007/08.

'Water in Schools' www.waterintheschools.co.uk

The company is a sponsor and partner in this collaborative web site project, which provides advice and information on water conservation, both for school management and for its pupils.

The aims of the site are to:

- Encourage schools to monitor their water use
- Introduce changes which will conserve water and so save money
- Foster responsible attitudes to water use in the pupils
- Encourage the pupils to apply their knowledge and understanding to global water and environmental issues.

The site consists of curriculum based lesson plans and educational documentation for teachers to download for use in the class room, school case studies, software to enter and analyse water meter readings which can then be related to maths lessons and links to other environmental web sites

Other water saving devices

The company has continued to subsidise and promote a range of water saving devices for use around the house and in the garden at open days and through advertising. A total of 24 composters, and 16 water-saving hanging baskets have been sold. As the savings relating to use of composters, and hanging baskets are difficult to quantify, and likely to be small, no figure has been included.

Review of the Bristol Water's Strategy and New Initiatives

Due to the customer satisfaction on the level of our activity and our resource position, the company has continued to base its water efficiency initiatives on the "Water Efficiency Strategy 2004" which it feels is still appropriate. This is based on an established range of activities focussing on the younger generation and gardeners to change attitudes to water use and management in the longer term.

However as part of the preparatory work for PR09 a detailed review and update of this strategy is being undertaken. This review is considering best practice shared amongst companies through the Water Efficiency Network and the Ofwat Best Practice Register, and will be informed by the outcome of various initiatives of the Water Savings Group, and feedback from our customers. A review of BW current activities and those in the Ofwat Best Practice Register has highlighted a number of areas for consideration. We will have to ensure that any changes to our currently successful strategy will continue to meet our customers needs and expectations.

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